The Indonesian Accounting Review Vol. 13, No. 2, July - December 2023, pages 145 - 159

Determinants of employee psychological ownership and its impact on sustainable manufacturing performance

Hanif Mauludin, Hegi Harjoyo, Darti Djuharni*

Sekolah Tinggi Ilmu Ekonomi (STIE) Malangkuçeçwara, Malang, East Java, Indonesia

ARTICLE INFO

Article history
Received 31 October 2022
Revised 16 June 2023
Accepted 21 June 2023

JEL Classification:
M20

Key words:
Servant Leadership, Growth Mindset, Capability Building, Employee Psychological Ownership, Sustainable Manufacturing Performance

DOI:
10.14414/tiar.v13i2.3372

ABSTRACT

This study aims to examine the determinants of employee psychological ownership and its effect on sus-tainable manufacturing performance. The population in this study is employees of a cigarette company in Indonesia. The sample used is 100 respondents, consisting of workers, supervisors, front line managers, and senior managers of a large cigarette company in Indonesia who are involved in initiative programs to achieve sustainable manufacturing performance. The sampling technique used is purposive sampling. Da-ta collection is carried out by distributing questionnaires directly to respondents and conducting focus group discussions (FGDs). The analytical tool used is Partial Least Squares with SmartPLS version 3. The results show that Servant Leadership has a significant effect on Growth Mindset and Capability Building; Growth Mindset and Capability Building have a significant effect on Employee Psychological Ownership; and Employee Psychological Ownership has a significant effect on Sustainable Manufacturing Perfor-mance. Therefore, to achieve sustainable manufacturing performance, it is necessary to have a strong em-ployee psychological ownership by forming a mindset to always grow, accompanied by increasing indi-vidual capabilities through effective servant leadership.

ABSTRAK

Penelitian ini bertujuan untuk menguji faktor-faktor penentu kepemilikan psikologis karyawan dan pengaruhnya terhadap kinerja manufaktur berkelanjutan. Populasi dalam penelitian ini adalah karyawan perusahaan rokok di Indonesia. Sampel yang digunakan adalah 100 responden yang terdiri dari pekerja, supervisor, front line man-ager, dan senior manager perusahaan rokok besar di Indonesia yang terlibat dalam program inisiatif untuk mencapai kinerja manufaktur yang berkelanjutan. Teknik pengambilan sampel yang digunakan adalah purposive sampling. Pengumpulan data dilakukan dengan menyebarkan kuesioner langsung kepada responden dan melakukan Focus Group Discussion (FGD). Alat analisis yang digunakan adalah Partial Least Squares dengan SmartPLS versi 3. Hasil penelitian menunjukkan bahwa Servant Leadership berpengaruh signifikan terhadap Growth Mindset dan Capability Building; Growth Mindset dan Capability Building berpengaruh signifikan terhadap Employee Psychological Ownership; dan Employee Psychological Ownership berpengaruh signif-ikan terhadap Sustainable Manufacturing Performance. Oleh karena itu, untuk men-capai kinerja manufaktur yang berkelanjutan, diperlukan kepemilikan psikologis karya-wan yang kuat dengan membentuk pola pikir untuk selalu berkembang, disertai dengan peningkatan kapabilitas individu melalui kepemimpinan yang bisa melayani secara efektif.

* *Corresponding author, email address: ita@stie-mce.ac.id*

1. INTRODUCTION

Manufacturing is one of the determinants of business strength and is an important part in supporting performance, especially in achieving the company's net profit. Compared to marketing costs, production costs have a greater effect on company's profitability (Silvia, 2020). In other industries, production costs have a very strong influence on profitability, whereas marketing costs do not make a direct contribution to profitability (Islami, Islami, Topuzovska Latkovikj, & Mulloli, 2019; Silvia, 2020). Various efforts have been made by companies to streamline production costs while maintaining product quality. Several previous studies have revealed methods of how to build individual and organizational capabilities in making improvements that have an impact on manufacturing performance. These methods include Total Quality Management, 5R (Concise, Neat, Clean, Careful and Diligent), PDCA (Plan Do Check Action), and Value Stream Mapping (Miller, Pawloski, & Standridge, 2010). In addition to these methods, one of the factors needed to improve manufacturing performance is the psychological ownership of employees. Sense of belonging, self-efficacy, self-identity and accountability have an impact on organizational performance (Ghafoor, Qureshi, Khan, & Hijazi, 2011). Leadership is also an important variable in achieving sustainable manufacturing performance. The results of research conducted by Kathuria, Partovi, and Greenhaus (2010) show that effective leaders have a positive effect on manufacturing performance. However, the results of research conducted by (Dewiruna, Subroto, & Subekti, 2020) show that managerial ability does not affect company performance. Currently there are various types of effective leadership for organizations, one of which is servant leadership.

Chan (2016), in his research, defines a servant leader as a leader who has a growth mindset and makes efforts to always develop self-effectiveness in listening, empathy, educating, awareness, persuasion, conceptualization, foresight, serving and being committed to individual and community growth. Individuals with a growth mindset have a greater influence on organizational performance than those with a fixed mindset. The results of research conducted by Cutumisu (2019) show that the growth mindset has a positive effect on organizational performance.

Factors that can improve manufacturing performance are capability building (Miller et al., 2010), employee psychological ownership (Miller et al., 2010), employee psychological ownership (Ghafoor et al., 2011), growth mindset (Cutumisu, 2019), and servant leadership (Gašková, 2020; Kathuria et al., 2010). However, there has been no comprehensive model that examines the role of servant leadership in increasing employee growth mindset and capability building which in turn can improve employee psychological ownership. Therefore, this study examines the effect of employee psychological ownership on sustainable manufacturing performance. This research emphasizes the sustainability aspect rather than just performance achievement.

Creating sustainable performance requires a multi-dimensional effort that involves a servant leadership role in cultivating a growth mindset and strengthening the capability building. In addition, increased employee psychological ownership can maintain sustainable performance. Therefore, this study aims to examine the determinants of employee psychological ownership and their impact on sustainable manufacturing performance.

2. THEORITICAL FRAMEWORK AND HYPOTHESIS

Strategic Human Resource Management (SHRM)

In order to survive in the VUCA world, companies must have qualified human resources. In the perspective of SHRM (Strategic Human Resource Management), the only effective way taken by companies is to build the people first, followed by strategy and others. The basic idea of SHRM is how to develop processes within an organization that align employee performance with the organization's strategic goals. When employees understand organizational priorities, they can contribute more by applying their skills to advance the organization's strategic goals (Greer, 2001).

Referring to SHRM, empowering human resources on strategic matters can provide a sustainable source of competitive advantage. Human capital must be managed well beyond hiring and retaining good people. Increasing their capability building so that they have a growth mindset is also a strategy for sustainable performance. The discussion of strategic human resource management is also relevant to the company's resource-based view which states that SHRM directs companies

to competitive advantage through scarce and valuable employee-based resources (Collins, 2021; Puhovichova & Jankelova, 2020). SHRM is used to explain how to manage and deploy human resources effectively to achieve sustainable performance so that competitive advantage can be increased from time to time.

Sustainable Manufacturing Performance

Manufacturing performance is very important in supporting the success of a company. Superior performance leads to competitiveness. In order to remain competitive, manufacturing companies must regularly evaluate performance to be able to compete globally. Performance evaluation can refer to indicators that are measured based on standards. These indicators can be grouped into 5 categories: cost, quality, flexibility, sustainability and time (Chryssolouris, Georgoulias, & Michalos, 2012). These categories can be expanded into sub-categories such as: availability, utilization, throughput, rework ratio, scrap ratio, machine flexibility, customer satisfaction, cycle time, flow time, corrective maintenance ratio, first time pass yield, mean time to failure, mean time to repair, overall equipment effectiveness production effectiveness, production process ratio, quality and various other indicators. These performance indicators should be demonstrated from the production floor to top management in supporting the continuous learning and improvement process (Amrina & Vilsi, 2015).

Sustainable Manufacturing Performance Requirement Indicators

Based on the literature review, many previous studies have discussed more about sustainable manufacturing performance than environmental management. Research conducted by Staniškis and Arbačiauskas (2009) shows that the criteria of indicators required to ensure the achievement of sustainable performance are comparable, meaningfulness, integrity, continuity, and clarity.. Comparable means that an indicator must be able to identify changes in performance. Meaningfulness means that an indicator is able to identify a decrease and an improvement in performance in order to increase the effectiveness of decisions. Integrity means that an indicator must be able to cover all major aspects in a sustainable context. Continuity means that an indicator is used continuously using the same method so that it can be evaluated easily. Clarity means that an indicator should have clear and specific criteria to avoid misunderstanding one another. The indicator system must be able to be used in a simple, practical and efficient way in the use of available resources.

In monitoring and evaluating sustainable manufacturing performance, organizations can use the criteria of indicators that represent the measurement of the dimensions of cost, quality, flexibility, sustainability and time. The implementation of the indicator criteria, such as comparable, meaningfulness, integrity, continuity and clarity, in organization is often referred to Perfect Week, meaning that performance can be achieved every hour until it accumulates in one week with measurement indicators of Zero Vision consisting of zero stop, zero accident, and zero quality incident. Zero Stop means running production line without a stop machine. Zero accident means running production line without any work accidents. Zero quality incident means the production process produces the final product without any defects and customer complaints Agustiady and Cudney (2018).

Servant Leadership

Chan (2016) in his research defines a servant leader as a leader who has a growth mindset and makes efforts to always develop self-effectiveness in listening, empathy, educating, awareness, persuasion, conceptualization, foresight, serving and being committed to individual and community growth. Servant leaders are always willing to serve and lead individuals and teams to be better from time to time through learning journeys in the perspective of the need for growth (Spence, 2010). These attributes can foster trust, integrity, honesty, caring, serving behavior, and a willingness to listen and empathize (Bavik, 2019).

Growth Mindset

How resilient a person is to rise from mistakes depends on his belief in learning. Individuals with a growth mindset believe that growth requires a strong effort and mistakes are seen as opportunities to learn and increase capacity. For individuals with a fixed mindset, they believe that ability is a talent that already exists and is permanent. Mistakes indicate a lack of ability or self-capacity (Cooper, Lee, Jeter, & Bradley, 2020; Rhew, Piro, Goolkasian, & Cosentino, 2018). Meanwhile, according to Dweck (2016), individuals who believe that

their talents or abilities can be developed through hard work, strategies, and feedback from others. Individuals who have a growth mindset will more easily achieve better performance over time than those who have a fixed mindset. A growth mindset is based on the belief that one can learn, develop, and change throughout life. A growth mindset is linked to using greater potential. The results of research conducted by Abernethy, Anderson, Nair, & Jiang (2021) show that managers with a growth mindset are motivated to optimize the use of resources, such as budgets.

Capability Building

The capability of organizations or individuals can be understood as a method for describing or representing what they have to do. The dimensions of capability include involvement, consistency, adaptability, and innovativeness. Involvement is where employees take part or participate in the organization. Consistency is the ability of employees to remain consistent with the same behavior from time to time. Adaptability is the ability with regard to the dynamics of the organization or the environment, the ability to adapt to various disturbances and challenges. Innovativeness is an employee's ability to apply a new approach or idea to achieve a standard, a need that has not been standardized or to solve a problem (Sinaga, Saragih, Rachmawati, & Alaeddin, 2019). Capability building is a process that focuses on creating an innovative way of working to solve organizational problems (Chaisung, Seokhee, & Hiroshi, 2013).

Employee Psychological Ownership

Psychological ownership is a phenomenon where employees develop a sense of belonging to the target (Van Dyne & Pierce, 2004). Psychological ownership is an individual's perception that ownership of an outcome is his desire, and this feeling reflects his thoughts and beliefs. Psychological ownership can be measured, developed and formed in individuals through the dimensions of self-efficacy, belonging, self-identity and accountability (Pierce, Kostova, & Dirks, 2003). Self-efficacy is an individual's belief in his ability to complete a task. Feelings that control actions in an individual's psychology are generating self-efficacy (Bandura, 1983). Meanwhile, accountability is a different dimension. It is more about a person's freedom to carry out a responsibility, own an object, protect or guard it with a sense of belonging (Goldberg, Lerner, & Tetlock, 1999). Self-identity is defined as the ownership or symbol of individuals who define their identity, and belonging is when employees identify with them in the organization that the target organization is also their target (Belk, 1988). The success of employees in developing their capabilities will psychologically increase the sense of ownership, which results in a sense of responsibility and professionalism.

Sustainable Manufacturing Performance

Sustainable manufacturing performance, in previous studies, is identical with the use and impact on natural resources in running the industry. It is still very rare to discuss specific manufacturing performance as an indicator of sustainable performance. Several previous studies that became the basis for the preparation of this research model include: Metrics-based Approach to Evaluate Sustainable Manufacturing Performance at the Production Line and Plant Levels in his research using the literature review method revealed that sustainable manufacturing performance requires metrics that are used to measure and evaluate regularly (Huang & Badurdeen, 2018).

Further, Adebanjo, Teh, Ahmed, Atay, and Ractham (2020) revealed that employee management and development has a positive effect on sustainable manufacturing performance with company priorities on quality, flexibility and cost indicators. In the industrial era 4.0, in practice it also affects sustainable manufacturing performance with strong mediation by lean manufacturing practice variables in a study conducted on 205 managers working in 115 corporations (Kamble, Gunasekaran, & Dhone, 2020)

The Effect of Servant Leadership in Growth Mindset and Capability Building

Servant leadership encourages the creation of a learning environment. Leaders who apply servant leaders serve their teams by listening, empathizing and educating while having high expectations for the team to be independent, responsive, and fully responsible. The incorporation of servant leadership theory and practice in individual development has a strong influence and significant impact. As a servant, servant leaders promote a growth mindset and build character in individual capacities/ capability building (Chan, 2016). Leaders who

are motivated to serve are leaders who practice servant leadership. Personal characteristics and culture are matched to the motivation dimension. Servant leadership empowers and develops people with humility, genuineness, good interpersonal, and stewardship and provides direction. Servant leadership creates trust and justice so that it is expected to be a driving force for employees to foster self-actualization, positive work attitudes, performance, stronger organizational focus on sustainability, and responsibility to the company. Therefore, the hypotheses proposed in this study are:

H_1: *Servant leadership has a significant effect on growth mindset*

H_2: *Servant leadership has a significant effect on growing capability building*

Contribution of Growth Mindset to Employee Psychological Ownership

An employee is said to have a growth mindset if the employee has a greater sense of belonging and is always committed to contributing, collaborating and even innovating. In this case, the growth mindset has a significant influence on the individual's tendency to achieve the target (Dweck, 2016). The growth mindset is closely related to psychological ownership, especially to individual self-efficacy behaviors and a sense of belonging in organizations (Puente-Díaz & Cavazos-Arroyo, 2017).

A growth mindset refers to core assumptions about the flexibility of one's intellectual abilities. Developing a growth mindset can maintain one's psychological well-being and involvement in one's work. A person with a growth mindset sees that he or she has opportunities to increase ownership in work. This psychological ownership includes important components such as personal meaning and purpose, engagement and interest; self-efficacy, self-acceptance, and respect. Therefore, the hypothesis proposed in this study is:

H_3: *Growth mindset has a significant effect on employee psychological ownership*

Contribution of Capability Building to Employee Psychological Ownership

In an increasingly competitive business environment, companies are trying to improve the performance of their employees. Development of employee capabilities includes the development of knowledge, skills and attitudes in carrying out their duties and responsibilities. The results of research conducted by Chaudhry, Jariko, Mushtaque, Mahesa, and Ghani (2017) show that employee capability development affects organizational performance with employee engagement as a mediation. Meanwhile, psychological ownership is a deep-rooted motivation and becomes a strong self-efficacy, so deep competence is needed. In the component of capability, attitude also has a role in presenting capable individuals in relation to psychological ownership, such as self-efficacy, belongings, self-identity and accountability (Pierce et al., 2003). Therefore, the hypothesis proposed in this study is:

H_4: Capability building has a significant effect on employee engagement

Contribution of Employee Psychological Ownership to Sustainable Manufacturing Performance

Psychological ownership has a positive influence on organizational performance. Psychological ownership produces employee work attitudes and behaviors that can have a tangible impact on the company (Torp & Nielsen, 2018). Commitment is also a very important dimension in achieving organizational performance. Employees are not only engaged, motivated, or productive, but also have an attachment to their organization. They have a sense of ownership based on their experience and are fully responsible for everything that happens in their organizational environment (Nazem, 2021). Several previous studies have also revealed that organizational performance is directly affected or mediated by psychological ownership (Ghafoor et al., 2011; Torp & Nielsen, 2018). Therefore, the hypothesis proposed is:

H_5: *Employee psychological ownership has a significant effect on sustainable manufacturing performance.*

Based on the explanation above, the research model that will be tested is compiled as follows (Figure 1).

3. RESEARCH METHOD

The population in this study is employees of cigarette manufacture in Indonesia. The sample used is 100 respondents, consisting of workers, supervisors, front line managers, and senior managers of cigarette manufacture

in Indonesia. The sampling technique used is purposive sampling. Respondent criteria include employees who are involved in initiative programs to achieve sustainable manufacturing performance. Based on these criteria obtained 100 respondents. The research variables and indicators are presented in Appendix 1.

Data collection was carried out by distributing questionnaires directly to selected respondents facilitated by company management. Researchers were also given the opportunity to conduct FGD with supervisors and managers to carry out external validation. From this FGD, researchers obtained additional information such as corporate culture and servant leadership practices as well as an overview of psychological ownership. The analytical tool used is partial least squares with Smartpls version 3.

Data Analysis

Description of Respondent

This study involves 100 respondents consisting of workers, supervisors, front line managers and senior managers. These employees are part of an initiative program to achieve sustainable manufacturing performance. They are in the machine manufacturing division with 2 factory locations in East Java and West Java, a large cigarette company in Indonesia.

Based on observations in the field, it is known that previously production machines stopped every 4 minutes. However, when this research was conducted, the machine could produce in 2,880 minutes (equivalent to 2 days) without stopping, without product defects and without work accidents. This can be achieved because of the interaction between servant leadership practices in cultivating the growth mindset of team members and building capabilities, which ultimately have an impact on sustainable performance. Leaders always provide coaching to workers effectively. The coaching process in solving problems is presented in the following table 1

Measurement Model Testing (Outer Model)

The outer model is a model that specifies the relationship between the latent variables and their indicators, or it can be said that the outer model defines how each indicator relates to its latent variables. Following are the Outer Loading values from the results of running PLS. To find out the results of the Discriminant Validity test in this study, it can be seen from table 2.

Cross loading shows that the correlation of the Sustainable Manufacturing Performance construct with its indicators is higher than the correlation of the Sustainable Manufacturing Performance indicator with other constructs. The correlation of the Growth Mindset construct with its indicators is higher than the correlation of the Growth Mindset indicator with other constructs, such as Servant Leadership, Capability Building, Employee Psychological Ownership. This shows that the latent construct predicts indicators in their block better than indicators in other blocks.

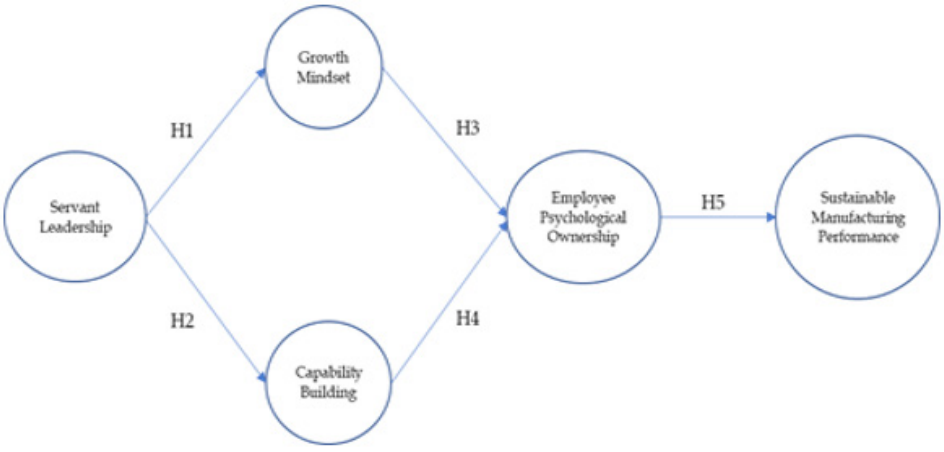

Figure 1
Research Model: Step Up Manufacturing Model (SUMM Model)

Table 1
Coaching Process in Problem Solving

Problem Solving	Sample Question
What	What did we do yesterday, last week, last month? What happened and what effect did it have on performance? What is the difference between before and after the problem occurred?
When	When did this problem start? What shift?
Where	Where does this problem occur? Which machine? What product?
Why	Why does this happen?

Source: Processed Data

Table 2
Cross Loading

	Capability Building	Employee Psychological Ownership	Growth Mindset	Servant Leadership	Sustainable Manufacturing Performance
CB1	0.799	0.598	0.419	0.502	0.255
CB2	0.884	0.717	0.632	0.509	0.293
CB3	0.885	0.784	0.624	0.637	0.465
CB4	0.802	0.640	0.575	0.461	0.285
EPO1	0.749	0.930	0.687	0.710	0.461
EPO2	0.652	0.874	0.692	0.680	0.575
EPO3	0.514	0.795	0.650	0.646	0.293
EPO4	0.798	0.735	0.590	0.510	0.306
GM1	0.628	0.757	0.947	0.673	0.480
GM2	0.600	0.721	0.934	0.585	0.256
GM3	0.626	0.675	0.871	0.486	0.216
SL1	0.442	0.573	0.421	0.806	0.682
SL2	0.639	0.759	0.677	0.899	0.647
SL3	0.302	0.555	0.371	0.740	0.596
SL4	0.483	0.710	0.665	0.860	0.476
SL5	0.567	0.716	0.585	0.860	0.576
SL6	0.597	0.587	0.423	0.804	0.672
SL7	0.611	0.517	0.474	0.844	0.575
SL8	0.565	0.691	0.605	0.893	0.544
SL9	0.452	0.593	0.489	0.828	0.525
SMP1	0.321	0.383	0.238	0.546	0.881
SMP2	0.159	0.257	0.169	0.472	0.855
SMP3	0.211	0.312	0.218	0.583	0.907
SMP4	0.359	0.457	0.393	0.613	0.895
SMP5	0.369	0.481	0.292	0.685	0.928
SMP6	0.513	0.613	0.448	0.719	0.907

Source: Processed Data

Construct reliability is said to be good it has Cronbach's alpha value above 0.70. Based on table 3, it can be seen that the Cronbach's alpha value for the Capability Building variable is 0.865, Employee Psychological Ownership variable is 0.854, Growth Mindset variable is 0.918, Servant Leadership variable is 0.952 and Sustainable Manufacturing Performance variable is 0.952. The Cronbach's alpha values for the 5 constructs in the model are all greater than 0.70. Thus, it can be said that the variables of Servant Leadership, Growth Mindset, Capability Building, Employee Psychological Ownership and Sustainable Manufacturing Performance have high construct reliability to almost 1, with a very strong level of reliability. So, the model in this study meets Construct reliability.

Goodness of Fit Structural Model (Inner Model)

Evaluation of the model is carried using R-square for the dependent construct. The R-square value reflects the predictive power of the entire model, with an R-square value limit greater than 0.10 or greater than 10 percent (or goodness-fit of the model). Based on data processing with PLS, the resulting coefficient of determination (R-square) is as follows (Table 4)

Goodness of Fit in PLS can be seen from the value of Q-square. The value of Q-square has the same meaning as the value of coefficient of determination (R-square / R^2) in the regression analysis. The higher the R-square value, the more fit the model is with the data. A Q-Square value greater than 0 (zero) indicates that the model has predictive relevance, while a Q-Square value less than 0 (zero) indicates that the model lacks predictive relevance. From table 4, it can be seen that the value of Q-square is as follows:

$Q^2 = 1 – (1 – R21) (1-R22) (1 – R23) …. (1 – R 2n)$
$= 1- (1-0.392) (1-0.764) (1-0.402) (1-0.242)$
$= 0.935 = 93.5\%$

In this research model, the R-square value generated in the overall model equation is 93.5%, which means that the structural model has very high predictive relevance and the model is getting better and feasible to use in predictions.

4. DATA ANALYSIS AND DISCUSSION

The Effect of Servant Leadership on Growth Mindset

Statistical testing proves that servant leadership has significant effect on growth mindset. Based on the activities in the field, there are tips that show the practice of leadership support in building a growth mindset. In growing the individual, the leader at the research location makes an effort to listen to every individual in the organization.

Feedback is to measure where the individual's current position is and then relevant actions are taken to increase understanding and belief in a goal including the changes needed to always be better (growth). This is in line with the results of research conducted by Jeffs et al. (2021) that providing and receiving feedback is

Table 3
Construct Reliability

	Cronbach's Alpha
Capability Building	0.865
Employee Psychological Ownership	0.854
Growth Mindset	0.906
Servant Leadership	0.947
Sustainable Manufacturing Performance	0.952

Source: Processed Data

Table 4
R-square Values

	R Square	R Square Adjusted
Capability Building	0.398	0.392
Employee Psychological Ownership	0.769	0.764
Growth Mindset	0.408	0.402
Sustainable Manufacturing Performance	0.250	0.242

Source: Processed Data

very essential in changing the fix into a growth mindset including the reaction to a feedback and its impact.

The figure below is a practice of feedback from individuals within the organization. In developing individual, the leader or coach sets priorities in daily briefings. The complexity of the problem, including the actions that must be taken, produces a long action list. In practice, however, the coach always teaches the concept of thinking on impact, risk, and resource analysis, including the urgency to always set 3 priorities that will be resolved every day (no more and no less). Complexity is broken down into simple, executable, and impactful mindsets. According to Rhew et al. (2018), simple is a mindset on a way to find solutions, do a lot of things with a little action. Leaders in the organization always give confidence in an unprecedented achievement with the terms "perfect shift", "perfect day" and "perfect week". This means that manufacturing can run without work accidents, without defective products, and without machine stopping for an achievable duration (can be in 1 shift, 1 day or even 1 week).

This belief stems from long-term thinking that is associated with change. It is easy to compare between before and after improvement, as revealed in the research conducted by Panizzon & Barcellos (2019). After a program of 6 months, unprecedented perfection began to be evident, starting with the number of perfect gear shifts. Even today, that perfection can last several weeks with the engine running continuously for 1 week

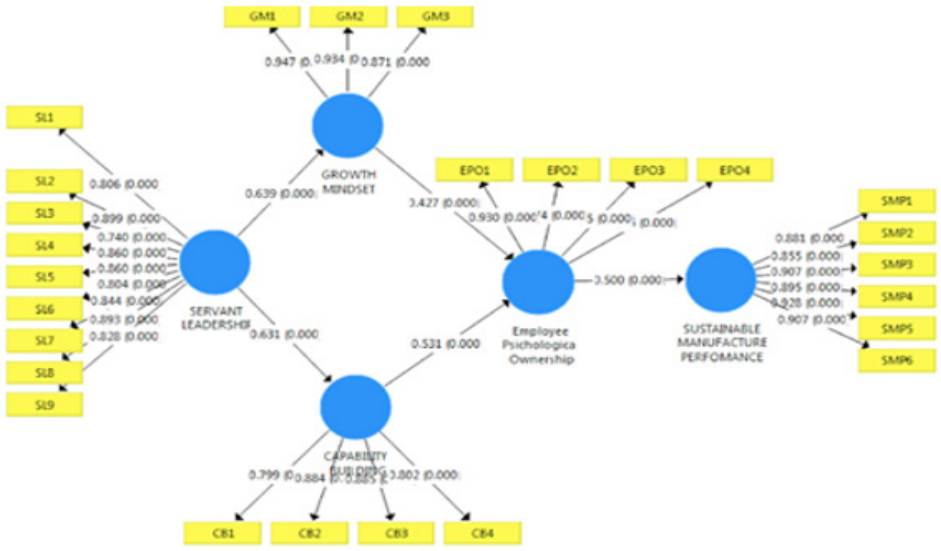

Figure 2
Bootstrapping Overall Model

Source: Processed Data

Table 5
Path coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
CB to EPO	0,531	0,530	0,111	4,787	0,000
EPO to SMP	0,500	0,518	0,073	6,865	0,000
GM to EPO	0,427	0,427	0,099	4,327	0,000
SL to CB	0,631	0,640	0,064	9,901	0,000
SL to GM	0,639	0,648	0,066	9,748	0,000

SL: Servant Leadership
GM: Growth Mindset
CB: Capability Building
EPO: Employee Psychological Ownership
SMP: Sustainable Manufacturing Performance

Source: Processed Data

straight (non-stop, no work accidents, and no product defects).

The Effect of Servant Leadership on Capability Building

Statistical testing proves that servant leadership has a significant effect on capability building which is indicated by leadership practices, such as commitment to individual development, including listening skills. a person's education is influenced by environmental factors and interactions with various parties, after which he will practice professionally after mingling (Guanghai, 2021; Scharlemann et al., 2020).

In the daily routine, the leader acts as a coach rather than giving orders. Each individual is given open-ended questions so that each individual can find their own learning and solutions to problem solving, planning, setting priorities and exercising control over execution. For example, leaders who serve as operators also participate in "deep cleaning" activities with the aim of fostering empathy so they can understand what is happening, what are the difficulties, what are the challenges, and what are the needs of workers in the field so that they can help individuals to be more successful and productive. Support from leaders and top management has a significant influence on individual success (Hess, 2018; Pranitasari, 2020). Bonau (2017) reveals that inspiring leaders have effective behavior by defining focus areas and measuring tools that must be built to measure implementation practices for progress.

The Effect of Growth Mindset on Employee Psychological Ownership

Statistical testing proves that the growth mindset has a significant effect on employee psychological ownership. It is necessary to form a mindset in building individual ownership, starting with building confidence that the targets set are very reasonable to achieve. This conditioning is carried out in the Team Buy In facility as previously reviewed. This confidence was strengthened in 16 weeks of learning week, containing process standards, evaluation and coaching methods, discipline, and resource allocation, so that process and ownership standards began to form. As stated in the research conducted by Dweck (2016) that the right mindset will provide individual tendency to be able to achieve the target. A red report card is a sign of growth opportunities, not the other way around to get scared and back off. If performance consistently shows sustainability, it is time to raise performance standards to a higher level, so that red report cards are always a part of everyday life.

The Effect of Capability Building on Employee Psychological Ownership

Statistical testing proves that capability building has a significant effect on employee psychological ownership which is indicated through individual development. In the daily routine at the research location there is a morning briefing to evaluate what has happened during the past 24 hours and what will be done in the next 24 hours. All manufacturing stakeholders involved structurally include: line or operational teams, coaches, trainers, leaders, as well as functions or parts of production, maintenance, quality, and training. And if needed, it can also involve other functions such as logistics, IT, and HR. This is in line with results of research conducted by Greving, Bruckermann, and Kimmerle (2020) that the high level of involvement will have a significant effect on the level of individual ownership. In ensuring the full involvement of every stakeholder, DDS (Daily Directing Setting) is held regularly from shift, daily, weekly to monthly levels and followed by relevant organizational level positions. The following picture is one of the DDS activities that are carried out every morning (daily). In implementing standards, consistency and discipline are things that are always done in building individual ownership with the "system health check (SHC)" mechanism. In SCH, leaders explore individual understanding of the standards that have been set, as well as check whether the system is running well and behavior daily activities and report evidence are also consistently carried out. In achieving sustainable change, improvement must be a new way of working, not just adding work. A change must be maintained and maintained (Urbanniak, 2017; Vora, 2013).

With the standard process, it is possible for common problems that occur in various business affiliates in other countries. The discovery of new standards or innovations carried out in improving performance or solving problems that arise may be found by individuals within the organization in achieving the targets that have been set. These discoveries are managed by a "reapplication" program. Every discovery is recorded in a system, validated by the committee and

then implemented to other affiliates so that individuals must be able to adapt to changes in innovation that occur and not only become readers, but also owners of this replication process in the organizations where they work. This is in line with research McConnell and Brown (2010) that individuals who have a positive attitude in the face of change will easily have a sense of ownership compared to those who are reluctant and resist a change.

The Effect of Employee Psychological Ownership on Sustainable Manufacturing Performance

Statistical testing proves that employee psychological ownership has a significant effect on sustainable manufacturing performance as indicated by the form of individual ownership. In building individuals who have total ownership of a function, the top position in an organizational line is changed from a Shift Manager who is only on duty according to his shift to a Line Head who is fully responsible for a line for 24 hours. Likewise, the production and maintenance functions have also been transformed into full responsibility, not only limited to shifts, with the formation of maintenance leads and process leads under Line Leads. This reduces the friction of decreasing performance between shifts and unsustainability of work and performance systems. This is in line with the results of research conducted by (Alharthi & Khalifa, 2019; Bakar, Yaacob, & Udin, 2015; Li, Zhang, Wei, & Han, 2019) that a sense of ownership has an influence on business continuity. Building ownership is also done by forming a first identity through individual agreements. Each line team has a name that contains a shared meaning about the goals to be achieved. One example is that the line team has the name "Sniper" where each individual wants to target the losses that occur in their work environment so that they are right on target and "killed" quickly. Individual ownership is personal and rooted in individual identity, control, and perception (Jussila et al., 2015; Karnilowicz, 2011).

Sustainable Manufacturing Performance

In evaluating performance in the company where this research was conducted, the measurements are taken from the aspect of safety, quality and delivery as research conducted by Randhawa & Ahuja (2018): zero stops (machine running without stopping), zero accident (no work accident) and zero quality incident (without any production defects).

In this study, achievement indicators are measured from time to time, starting from each shift, daily and then processed into weekly and monthly reports. How to measure these indicators is regulated in internal documents and is controlled periodically by the relevant section with approval from the authorized position. Achievements are presented in the form of visualization in the field so that anyone with an interest in the organization can access them easily. In its implementation, when this SUMM has not been run, on average the machine stops every 4 minutes with problems starting from clogged materials, until the engine is damaged which causes it to stop for more than 4 hours. The most recent performance achieved is the perfect week where the machine runs without stopping for a full week, without any product defects or work accidents, where the average machine is now able to stop for a minimum of 24 hours (previously 4 minutes once stopped).

5. CONCLUSION, IMPLICATION, SUGGESTION AND LIMITATION

The indicators used in this study such as Sustainable Manufacturing Performance, Employee Psychological Ownership, Capability Building, Growth Mindset and Servant Leadership have fulfilled the elements of validity and reliability. The results of Goodness of fit test show that the structural model has very high predictive relevance. The model is getting better and feasible to use in predictions. Based on the results of statistical testing, it can be concluded all hypotheses are accepted. Servant Leadership has a significant effect on Growth Mindset and Capability Building; Growth Mindset and Capability Building have a significant effect on Employee Psychological Ownership; and Employee Psychological Ownership has a significant effect on Sustainable Manufacturing Performance. Therefore, to achieve sustainable manufacturing performance, it is necessary to have a strong employee psychological ownership by forming a mindset to always grow, accompanied by increasing individual capabilities (capability building) through effective servant leadership.

The managerial implication of this study is that companies should practice servant leadership with a coaching approach with

the aim of fostering mental growth for team members so that they have space to find the best way to solve their work problems. Employee capacity building activities should be carried out consistently. Leaders should support with resources to increase the contribution of the learning outcomes they get.

This study is limited to access to data, especially the very limited duration of time in the FGD. So there are new findings that have not been examined in depth, such as issues of corporate culture, coaching intensity and effectiveness. However, these limitations provide opportunities for further research in the future.

REFERENCES

Abernethy, M. A., Anderson, S. W., Nair, S., & Jiang, Y. A. (2021). Manager 'growth mindset'and resource management practices. *Accounting, Organizations and Society, 91*, 101200.

Adebanjo, D., Teh, P.-L., Ahmed, P. K., Atay, E., & Ractham, P. (2020). Competitive priorities, employee management and development and sustainable manufacturing performance in Asian organizations. *Sustainability, 12*(13), 5335.

Agustiady, T. K., & Cudney, E. A. (2018). Total productive maintenance. *Total Quality Management & Business Excellence*, 1-8.

Alharthi, M., & Khalifa, G. S. (2019). Business continuity management and crisis leadership: an approach to re-engineer crisis performance within Abu Dhabi Governmental entities. *International Journal on Emerging Technologies, 10*(2), 32-40.

Amrina, E., & Vilsi, A. L. (2015). Key performance indicators for sustainable manufacturing evaluation in cement industry. *Procedia Cirp, 26*, 19-23.

Bakar, Z. A., Yaacob, N. A., & Udin, Z. M. (2015). The effect of business continuity management factors on organizational performance: A conceptual framework. *International Journal of Economics and Financial Issues, 5*(1), 128-134.

Bandura, A. (1983). Self-efficacy determinants of anticipated fears and calamities. *Journal of Personality and Social Psychology, 45*(2), 464.

Bavik, A. (2019). A systematic review of the servant leadership literature in management and hospitality. *International Journal of Contemporary Hospitality Management*.

Belk, R. W. (1988). Possessions and the extended self. *Journal of consumer research, 15*(2), 139-168.

Bonau, S. (2017). How to become an inspirational leader, and what to avoid. *Journal of Management Development*.

Chaisung, L., Seokhee, H., & Hiroshi, I. (2013). Capability building through innovation for unserved lower end mega markets. *Technovation, 33*(12), 391-404.

Chan, K. W. C. (2016). Servant leadership cultivates grit and growth mindset in learners. *Servant Leadership: Theory & Practice, 3*(2), 2.

Chaudhry, N. I., Jariko, M. A., Mushtaque, T., Mahesa, H. A., & Ghani, Z. (2017). Impact of Working Environment and Training & Development on Organization Performance through Mediating Role of Employee Engagement and Job Satisfaction. *European Journal of Training and Development Studies, Vol.4*(No.2), 33-48.

Chryssolouris, G., Georgoulias, K., & Michalos, G. (2012). Production systems flexibility: theory and practice. *IFAC Proceedings Volumes, 45*(6), 15-21.

Collins, C. J. (2021). Expanding the resource based view model of strategic human resource management. *The International Journal of Human Resource Management, 32*(2), 331-358.

Cooper, J. B., Lee, S., Jeter, E., & Bradley, C. L. (2020). Psychometric validation of a growth Mindset and Team Communication Tool to measure self-views of growth mindset and team communication skills. *Journal of the American Pharmacists Association, 60*(6), 818-826.

Cutumisu, M. (2019). The association between feedback-seeking and performance is moderated by growth mindset in a digital assessment game. *Computers in Human Behavior, 93*, 267-278.

Dewiruna, I., Subroto, B., & Subekti, I. (2020). The Effect of R&D intensity, intellectual capital and managerial ability on firm's performance with political connection as a moderating variable. *The Indonesian Accounting Review, 10*(1), 13-24.

Dweck, C. (2016). What having a "growth mindset" actually means. *Harvard Business Review, 13*(2), 2-5.

Gašková, J. (2020). Servant leadership and its relation to work performance. *Central European Business Review, 9*(3).

Ghafoor, A., Qureshi, T. M., Khan, M. A., & Hijazi, S. T. (2011). Transformational leadership, employee engagement and performance: Mediating effect of psychological ownership. *African journal of business management, 5*(17), 7391.

Goldberg, J. H., Lerner, J. S., & Tetlock, P. E. (1999). Rage and reason: The psychology of the intuitive prosecutor. *European Journal of Social Psychology, 29*(5-6), 781-795.

Greer, C. R. (2001). *Strategic Human Resource Management,* (Second Edition ed.): Pearson Custom Publishing.

Greving, H., Bruckermann, T., & Kimmerle, J. (2020). This is my project! The influence of involvement on psychological ownership and wildlife conservation. *Current Research in Ecological and Social Psychology, 1*, 100001.

Guanghai, Z. (2021). Forms Organization of Work With People With Special Educational Needs in China. *Professional Education: Methodology, Theory and Technologies*(13), 96-109.

Hess, D. W. (2018). *Leadership by engineers and scientists: Professional skills needed to succeed in a changing world*: John Wiley & Sons.

Huang, A., & Badurdeen, F. (2018). Metrics-based approach to evaluate sustainable manufacturing performance at the production line and plant levels. *Journal of Cleaner Production, 192*, 462-476.

Islami, X., Islami, V., Topuzovska Latkovikj, M., & Mulloli, E. (2019). Barriers hindering the entry of new firms to the competitive market and profitability of incumbents. *Management: journal of contemporary management issues, 24*(2), 121-143.

Jeffs, C., Nelson, N., Grant, K. A., Nowell, L., Paris, B., & Viceer, N. (2021). Feedback for teaching development: moving from a fixed to growth mindset. *Professional Development in Education*, 1-14.

Jussila, I., Tarkiainen, A., Sarstedt, M., & Hair, J. F. (2015). Individual psychological ownership: Concepts, evidence, and implications for research in marketing. *Journal of Marketing Theory and Practice, 23*(2), 121-139.

Kamble, S., Gunasekaran, A., & Dhone, N. C. (2020). Industry 4.0 and lean manufacturing practices for sustainable organisational performance in Indian manufacturing companies. *International Journal of Production Research, 58*(5), 1319-1337.

Karnilowicz, W. (2011). Identity and psychological ownership in chronic illness and disease state. *European journal of cancer care, 20*(2), 276-282.

Kathuria, R., Partovi, F. Y., & Greenhaus, J. H. (2010). Leadership practices, competitive priorities, and manufacturing group performance. *International Journal of Operations & Production Management*.

Li, Y., Zhang, Y., Wei, J., & Han, Y. (2019). Status quo and future directions of facility management: a bibliometric–qualitative analysis. *International journal of strategic property management, 23*(5), 354-365.

McConnell, A. R., & Brown, C. M. (2010). Dissonance averted: Self-concept organization moderates the effect of hypocrisy on attitude change. *Journal of Experimental Social Psychology, 46*(2), 361-366.

Miller, G., Pawloski, J., & Standridge, C. (2010). A case study of lean, sustainable manufacturing. *Journal of Engineering and Management, 3*(1), 11-32. 10.3926/jiem.2010.v3n1.p11-32

Nazem, A. H. (2021). A Structural Model for High Performance Work Systems Based On Organizational Innovative Climate, Psychological Empowerment and Organizational Commitment in Noswhahr Naval Academy. *Journal of Research on Management of Teaching in Marine Sciences, 8*(1), 163-179.

Panizzon, M., & Barcellos, P. F. P. (2019). A Three-Level Evaluation Process of Cultural Readiness for Strategic Foresight Projects. *World Futures Review, 11*(4), 331-350.

Pierce, J. L., Kostova, T., & Dirks, K. T. (2003). The state of psychological ownership: Integrating and extending a century of research. *Review of General Psychology, 7*(1), 84-107.

Pranitasari, D. (2020). The influence of effective leadership and organizational trust to teacher's work motivation and organizational commitment. *Media Ekonomi dan Manajemen, 35*(1), 75-91.

Puente-Díaz, R., & Cavazos-Arroyo, J. (2017). The influence of creative mindsets on achievement goals, enjoyment, creative self-efficacy and performance among business students. *Thinking Skills and Creativity, 24*, 1-11.

Puhovichova, D., & Jankelova, N. (2020). Changes of human resource management in the context of impact of the fourth industrial revolution. *Industry 4.0, 5*(3), 138-141.

Randhawa, J. S., & Ahuja, I. S. (2018). An investigation into manufacturing performance achievements accrued by Indian manufacturing organization through strategic 5S practices. *International Journal of Productivity and Performance Management*.

Rhew, E., Piro, J. S., Goolkasian, P., & Cosentino, P. (2018). The effects of a growth mindset on self-efficacy and motivation. *Cogent Education, 5*(1), 1492337.

Scharlemann, J. P., Brock, R. C., Balfour, N., Brown, C., Burgess, N. D., Guth, M. K., . . . Wicander, S. (2020). Towards understanding interactions between Sustainable Development Goals: The role of environment–human linkages. *Sustainability science, 15*(6), 1573-1584.

Silvia, Z. I. (2020). Pengaruh Penjualan, BIaya Produksi dan Biaya Pemasaran Terhadap Laba Perusahaan (Pada PT. Bina Megah Indowood Gresik Tahun 2015-2018). *JEKMA, 1*(4).

Sinaga, O., Saragih, N. I., Rachmawati, R., & Alaeddin, O. (2019). Does Organizational Culture Capability and Relationship Building Capability Expediate Supply Chain Operational Performance? Evidence from Indonesia. *Int. J Sup. Chain. Mgt Vol, 8*(1), 242.

Spence, C. (2010). Accounting for the dissolution of a nation state: Scotland and the Treaty of Union. *Accounting, Organizations and Society, 35*(3), 377-392.

Staniškis, J. K., & Arbačiauskas, V. (2009). Sustainability performance indicators for industrial enterprise management. *Environmental Research, Engineering and Management, 48*(2), 42-50.

Torp, S., & Nielsen, B. B. (2018). Psychological ownership and financial firm performance: The interplay of employee stock ownership and participative leadership. *Australian Journal of Management, 43*(3), 476-492.

Urbanniak, B. (2017). Colorful Human Resource Management: What Are We Talking About? *Zarządzanie Zasobami Ludzkimi, 6(119)*, 9-19.

Van Dyne, L., & Pierce, J. L. (2004). Psychological ownership and feelings of possession: Three field studies predicting employee attitudes and organizational citizenship behavior. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 25*(4), 439-459.

Vora, M. K. (2013). Business excellence through sustainable change management. *The TQM Journal*.

Appendix 1. Operational Definition of Variables and Measurements

Variable	Operational Definition	Indicator
Servant Leadership (Chan 2016)	The art of servant leadership with a focus on individual growth.	Listening Empathy Healing Awareness Persuasion Conceptualization Foresight Stewardship Commitment to People Growth Building Community
Growth Mindset (Moser et al. 2011)	The mindset, belief is accompanied by maximum effort to continue to learn, grow and increase self-capacity	Believe Learning Effort
Capability Building (Sinaga et al. 2019)	Individual abilities embodied in a method of what to do in carrying out duties and responsibilities	Involvement Consistency Adaptability Innovativeness
Employee psychological ownership (Pierce et al. 2003)material and immaterial in nature. We refer to this state as psychological ownership. Building on and extending previous scholarship, the authors offer a conceptual examination of this construct. After defining psychological ownership, they address \"why\" it exists and \"how\" it comes into being. They propose that this state finds its roots in a set of intraindividual motives (efficacy and effectance, self-identity, and having a place to dwell	Feelings, perceptions and beliefs are manifested in the form of employee ownership of an outcome or target.	Self-efficacy Belonging Self-identity Accountability
Sustainable Manufacturing Performance (Staniškis and Arbačiauskas 2009)	Perception of each individual in the organization to the achievement of manufacturing performance that can be consistently measured from time to time.	Comparable Meaningfulness Integrity Continuity Clarity Efficiency